

REMARKS

Claims 1-4, 9-19, 71, 74-81, 86-90, 92, and 94-111 were pending and stand rejected.

Claims 87 and 89-90 have been cancelled. Claims 1-4, 9-19, 71, 74-81, 86, 88, 92, and 94-111 are pending upon entry of this amendment.

Claims 1, 4, 9-10, 12-18, 71, 74-75, 77-78, 94-96, 98-104, and 106-107 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Grinstein. Applicants respectfully traverse.

CLAIM 1

Claim 1, which has not been amended, recites:

In a computer-implemented animation system, a method for animating an object, the method comprising:

receiving a first input, the first input specifying a first parameter behavior, the first parameter behavior indicating how to change a value of a first parameter over time, wherein the first parameter applies to one element of a group consisting of a filter applied to the object and a generator applied to the object;
animating the object by changing the value of the first parameter over time according to the specified parameter behavior; and
outputting the animated object.

As recited in claim 1, a “parameter behavior” indicates how to change, over time, a value of a parameter of a filter or generator that is applied to the object. As explained in the application, a filter is an image processing effect (¶1627), and a generator is a repeating image (¶1567). A filter or generator can be customized using a parameter. The value of the parameter affects the filter or generator, which in turn affects the appearance of an object. For example, a filter with a parameter value of 1 will result in a different appearance than the same filter with a parameter value of 10. The value of a filter’s parameter or a generator’s parameter can be programmatically animated (i.e., changed over time) by using a parameter behavior (¶¶245, 248, 487). This results in different appearances as time goes on, based on the different values of the parameter.

Grinstein discusses modeling motion in computer applications (title). Grinstein does not disclose, teach, or suggest the claimed element “the first parameter behavior indicating how to change a value of a first parameter over time, wherein the first parameter applies to one element of a group consisting of a filter applied to the object and a generator applied to the object” (emphasis added).

Applicants agree with the Examiner that Grinstein does not use the language “filters” (Detailed Action, page 3). The Examiner argues that the Ramp and Ease controls applied to the Swing motion applied to the object are analogous to filters (Detailed Action, p. 3). Applicants disagree.

The Ramp sliders control the acceleration and deceleration in and out of an entire motion (51:24-25). The Ease sliders control the acceleration and deceleration to and from a displacement sequence (51:25-27). As explained above, a filter is an image processing effect. Neither the Ramp controls nor the Ease controls are image processing effects. Thus, neither the Ramp controls nor the Ease controls are filters.

Grinstein does not mention generators.

Thus, Grinstein does not disclose, teach, or suggest the claimed element “the first parameter behavior indicating how to change a value of a first parameter over time, wherein the first parameter applies to one element of a group consisting of a filter applied to the object and a generator applied to the object.”

Therefore, claim 1 is patentable over Grinstein.

CLAIMS 71, 94

Claim 71, which has not been amended, recites:

A method for animating an object using a behavior, comprising:
outputting an original animation for the object according to a first
parameter behavior, the first parameter behavior indicating how to

change a value of a first parameter over time, wherein the first parameter applies to a motion behavior applied to the object; concurrently with outputting the original animation:

- receiving a first user input, the first user input specifying a second parameter of the motion behavior; and
- receiving a second user input, the second user input specifying a second parameter behavior, the second parameter behavior indicating how to change a value of the second parameter over time; and

outputting an updated animation for the object according to the first parameter behavior and further according to the second parameter behavior.

As recited in claim 71, a “parameter behavior” indicates how to change, over time, a value of a parameter of a “motion behavior.” As explained in the application, in one embodiment, a motion behavior changes an object’s position over time, thereby animating the object (¶247). A motion behavior can be customized using a parameter (¶9). The value of the parameter affects the motion behavior, which in turn affects the animation of an object. For example, a motion behavior with a parameter value of 1 will result in a different animation than the same motion behavior with a parameter value of 10.

The value of a motion behavior’s parameter can be programmatically animated (i.e., changed over time) by using a parameter behavior (¶402). This results in different animations as time goes on, based on the different values of the parameter. For example, consider the Drag parameter of the Orbit Around motion behavior (¶404). If the value of the Drag parameter is kept constant over time, the object moves in a regular orbit with a circular motion path (¶404; FIG. 34). If, instead, the value of the Drag parameter is increased over time (e.g., using the Ramp parameter behavior), the object’s orbit slowly decays over time, causing the object to fall towards the center of the orbit with a spiral motion path (¶404; FIG. 35).

Grinstein does not disclose, teach, or suggest the claimed elements “receiving a first user input, the first user input specifying a second parameter of the motion behavior” and “receiving a second user input, the second user input specifying a second parameter behavior, the second

parameter behavior indicating how to change a value of the second parameter over time.” Note that this portion of claim 71 recites receiving two user inputs: a) a first user input that specifies a second parameter of the motion behavior and b) a second user input that specifies a second parameter behavior, the second parameter behavior indicating how to change a value of the second parameter over time.

The Examiner argues that Grinstein’s controllers correspond to this claimed element. Controllers, such as the Sway controller (52:47-56; FIGS. 31-32) and the Wind controller (52:57-61; FIGS. 29-30), are used to set the parameters of various “controlled motions” (49:59-50:15). Specifically, the variable parameters of a controlled motion are derived from the controllers (49:61-62).

Assume, *arguendo*, that the claimed element “motion behavior” corresponds to a controlled motion (a type of pre-defined animation) in Grinstein. The controller dialog boxes in FIGS. 29 and 32 enable a user to set a value for a controller parameter (e.g., minimum angle or strength), which is then used to derive a parameter of a controlled motion. Claim 71 recites “receiving a first user input, the first user input specifying a second parameter of the motion behavior.” The controller dialog boxes do not enable a user to specify a parameter of a controlled motion (e.g., the parameter that is supposed to be affected by the controller). Instead, the controller dialog boxes indirectly influence the controlled motion (49:60-61). Thus, this portion of Grinstein does not disclose, teach, or suggest the claimed element “receiving a first user input, the first user input specifying a second parameter of the motion behavior.”

Claim 71 also recites “receiving a second user input, the second user input specifying a second parameter behavior, the second parameter behavior indicating how to change a value of the second parameter over time.” The controller dialog boxes do not enable a user to specify how to change a value of a parameter of a controlled motion. Instead, the controller dialog boxes

indirectly influence the controlled motion (49:60-61). Thus, this portion of Grinstein does not disclose, teach, or suggest the claimed element “receiving a second user input, the second user input specifying a second parameter behavior, the second parameter behavior indicating how to change a value of the second parameter over time.”

Thus, Grinstein does not disclose, teach, or suggest the claimed elements “receiving a first user input, the first user input specifying a second parameter of the motion behavior” and “receiving a second user input, the second user input specifying a second parameter behavior, the second parameter behavior indicating how to change a value of the second parameter over time.”

Therefore, claim 71 is patentable over Grinstein. Claim 94 recites similar language is also patentable over Grinstein for at least the same reasons.

CLAIM 88

Claims 11, 88, 97, and 110 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Grinstein. Applicants respectfully traverse.

Claim 88, which has not been amended, recites:

In a computer-implemented animation system, a method for animating an object, the method comprising:

receiving an input, the input specifying a behavior to apply to the object,
the behavior indicating how to change a value of a parameter of
the object over time;

animating the object by changing the value of the parameter of the object
over time according to the specified behavior; and
outputting the animated object;

wherein the behavior comprises one from a group consisting of:

a Drag behavior, which changes a position of the object based on a
simulated friction; and

a Rotational Drag behavior, which changes a rotation of the object based
on a simulated friction.

Claim 88 recites, in part, “a behavior to apply to the object … wherein the behavior comprises one from a group consisting of: a Drag behavior, which changes a position of the object based on

a simulated friction; and a Rotational Drag behavior, which changes a rotation of the object based on a simulated friction.” As described in the pending application, the Drag behavior is meant to be applied to a moving object (i.e., an object whose position parameter is changing over time) (¶623). The Rotational Drag behavior is meant to be applied to a spinning object (i.e., an object whose rotation parameter is changing over time) (¶731). These behaviors can be used, for example, to simulate the effect of friction on a moving object (¶¶623, 731).

Grinstein does not disclose, teach, or suggest the claimed element “a behavior to apply to the object … wherein the behavior comprises one from a group consisting of: a Drag behavior, which changes a position of the object based on a simulated friction; and a Rotational Drag behavior, which changes a rotation of the object based on a simulated friction.” A boundary behavior’s “gain” and “bias” parameters, which were cited by the Examiner, can be used to simulate effects of gain or loss of momentum (e.g., due to friction) (36:17-20). However, even if the object changes momentum, it must still move according to a boundary behavior. Boundary behaviors includes reflect, clamp, and onto (35:25-36:15). Thus, friction can be simulated only if the object is performing the reflect, clamp, or onto behavior. Friction cannot be simulated for an object that is moving in an arbitrary (non-boundary behavior) way.

Thus, Grinstein does not disclose, teach, or suggest the claimed element “a behavior to apply to the object … wherein the behavior comprises one from a group consisting of: a Drag behavior, which changes a position of the object based on a simulated friction; and a Rotational Drag behavior, which changes a rotation of the object based on a simulated friction.”

Therefore, claim 88 is patentable over Grinstein.

CLAIM 86

Claim 86 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Grinstein in view of Unuma. Applicants respectfully traverse. Additionally, for the record, Applicants traverse the Examiner’s assertions concerning the motivation to combine Grinstein and Unuma.

Claim 86, which has not been amended, recites:

In a computer-implemented animation system, a method for animating an object, the method comprising:

receiving an input, the input specifying a behavior, the behavior indicating how to change a value of a parameter of the object over time;
animating the object by changing the value of the parameter of the object over time according to the specified behavior; and
outputting the animated object;

wherein the behavior comprises one from a group consisting of a Snap Alignment to Motion behavior and an Align to Motion behavior, each of which changes a rotation of the object based on a motion path of the object such that the rotation is not changed if the motion path is straight.

Claim 86 recites, in part, “wherein the behavior comprises one from a group consisting of a Snap Alignment to Motion behavior and an Align to Motion behavior, each of which changes a rotation of the object based on a motion path of the object such that the rotation is not changed if the motion path is straight.” As described in the pending application, the Snap Alignment to Motion behavior and the Align to Motion behavior are meant to be applied to a moving object (i.e., an object whose position parameter is changing over time) (¶¶460, 581). These behaviors change the rotation of the object to match changes made to the object’s direction along its motion path (¶¶460, 581). These behaviors can be used, for example, to cause an object to face the direction in which it is moving.

Applicants agree with the Examiner that Grinstein does not disclose, teach, or suggest the claimed element “wherein the behavior … changes a rotation of the object based on a motion path of the object such that the rotation is not changed if the motion path is straight.”

Unuma does not remedy this deficiency. Unuma discusses a transit point specifying unit and a moving direction controller (¶131; FIG. 15). The transit point specifying unit designates a

transit point of a person object (¶131; FIG. 16). Then, the moving direction controller rotates the person object so that the front side of the object faces towards the transit point (¶131).

Claim 86 recites, in part, “such that the rotation is not changed if the motion path is straight” (emphasis added). In Unuma, the motion path of the person object is straight (see FIG. 16). However, the person object is still rotated (¶131). In other words, even though the motion path is straight, the rotation is changed. It follows that Unuma does not disclose, teach, or suggest “such that the rotation is not changed if the motion path is straight.”

Thus, neither Grinstein nor Unuma, alone or in combination, disclose, teach, or suggest the claimed element “wherein the behavior comprises one from a group consisting of a Snap Alignment to Motion behavior and an Align to Motion behavior, each of which changes a rotation of the object based on a motion path of the object such that the rotation is not changed if the motion path is straight.”

Therefore, claim 86 is patentable over Grinstein and Unuma, alone and in combination.

CLAIM 87

Claim 87 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Grinstein in view of Perlin. Applicants respectfully traverse. Additionally, for the record, Applicants traverse the Examiner’s assertions concerning the motivation to combine Grinstein and Perlin. Claim 87 has been cancelled.

CLAIMS 89-90

Claims 89-90 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Grinstein in view of Hiroike. Applicants respectfully traverse. Additionally, for the record,

Applicants traverse the Examiner's assertions concerning the motivation to combine Grinstein and Hiroike. Claims 89-90 have been cancelled.

CLAIM 92

Claim 92 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Miller in view of Altman further in view of Land. Applicants respectfully traverse. Additionally, for the record, Applicants traverse the Examiner's assertions concerning the motivation to combine Miller, Altman, and Land.

Claim 92, which has not been amended, recites:

In a computer-implemented animation system, a method for animating a text object, the method comprising:

receiving an input, the input specifying a behavior, the behavior indicating how to change a value of a parameter of the text object over time; animating the object by changing the value of the parameter of the text object over time according to the specified behavior; and outputting the animated text object;
wherein the behavior comprises a Randomize behavior, which incrementally displays the text object character-by-character, wherein character order is random.

Claim 92 recites, in part, "wherein the behavior comprises a Randomize behavior, which incrementally displays the text object character-by-character, wherein character order is random." As described in the pending application, the Randomize behavior randomly generates different characters in a text object (¶1190).

The Applicants agree with the examiner that neither Miller nor Altman discloses, teaches, or suggests the claimed element "wherein the behavior comprises a Randomize behavior, which incrementally displays the text object character-by-character, wherein character order is random" (emphasis added).

Land does not remedy this deficiency. Land discusses various types of media objects, such as text objects and picture objects (¶112). A media object can be "played" by using a start

command (¶112). Media object playback behavior includes, for example, undulate, zoom-in, fade-out, and time-out (¶115-118). A container object, which contains one or more media objects, can also be “played” (¶112). Container object playback behavior includes playing one or more of the media objects contained within the container object (¶112).

In the portion of Land cited by the Examiner, playing a container object causes one of the contained media objects to start playing (¶113). The decision regarding which media object starts playing is made randomly (¶113). In Land, each media object is either playing or not playing. Thus, a text object is either playing or not playing. When the text object is not playing, it is not being displayed. When the text object is playing, it is being displayed according to a particular playback behavior. While Land does disclose a few playback behaviors (see above), none of these behaviors displays a text object character-by-character, wherein character order is random. It follows that Land does not disclose, teach, or suggest the claimed element “wherein the behavior comprises a Randomize behavior, which incrementally displays the text object character-by-character, wherein character order is random.”

Thus, neither Miller nor Altman nor Land, alone or in combination, discloses, teaches, or suggests the claimed element “wherein the behavior comprises a Randomize behavior, which incrementally displays the text object character-by-character, wherein character order is random.”

Therefore, claim 92 is patentable over Miller, Altman, and Land, alone and in combination.

OTHER CLAIMS

Claims 2, 108, and 111 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Grinstein in view of Walton. Claims 3 and 105 stand rejected under 35 U.S.C. § 103(a) as

being unpatentable over Grinstein in view of Gagne. Claims 19 and 109 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Grinstein in view of Anderson. Claims 76 and 79 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Grinstein in view of French. Claims 80-81 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Grinstein in view of Sowizral.

Applicants respectfully traverse. The claims not specifically mentioned above depend from their respective base claims, which were shown to be patentable over Grinstein. In addition, these claims recite other features not included in their respective base claims. Thus, these claims are patentable for at least the reasons discussed above, as well as for the elements that they individually recite.

Applicants respectfully submit that the pending claims are allowable over the cited art of record and request that the Examiner allow this case. The Examiner is invited to contact the undersigned in order to advance the prosecution of this application.

Respectfully submitted,
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